



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re patent application of:

Yun LING, et al.

Serial No.: 10/054,083

Group Art Unit: 2841

Filed: January 18, 2002

Examiner: D. Levi

FOR: A NOVEL LEVER DESIGN THAT COMBINES MODULE
INSERTION, RETENTION, EJECTION FUNCTIONS FOR
ADD-IN CARDS

BRIEF ON APPEAL

Mail Stop Appeal Brief - Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Applicant submits this brief on appeal, thus perfecting the notice of appeal filed on December 8, 2003. A petition for a two month extension of time is submitted herewith.

The headings and subject matter under rule 192 follow.

(1) Real Party in Interest

This case is assigned of record to Intel Corporation, who is the real party in interest.

(2) Related Appeals and Interferences

There are no known related appeals and / or interferences.

(3) Status of Claims

Claims 1-19 are pending in the case and stand rejected.

(4) Status of Amendments

After the final rejection, an amendment was filed on November 7, 2003. The advisory action mailed November 26, 2003 fails to set forth the status of the amendment. However, because the amendment simply corrected an editorial problem with claim 15, it is expected that the amendment has been entered, or that the Examiner has no objection to its entry at this time. The attached Appendix of Claims includes the amendment to claim 15.

(5) Summary of Invention

By way of background, the present invention is directed to connector having a lever mechanism which in most applications will reduce the amount of user force required to insert a card in a slot or remove the card from the slot. In contrast to the present invention, both of the cited references are directed only to card retention mechanisms, with no levers.

(6) Issues

I. The rejection of the claims 1-4, 7 and 8 under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,305,966 (Arbogast) is in error.

II. The rejection of the claims 5, 6, 9-19 under 35 U.S.C. § 103(a) as being unpatentable over Arbogast in view of U.S. Patent No. 5,889,656 (Yin) is in error.

(7) Grouping of the Claims

Grouping of the claims is deferred pending the Examiner's response.

- Group I: Claims 1-3 stand or fall together;
- Group II: Claim 4 stands or falls on its own;
- Group III: Claim 7 stands or falls on its own;
- Group IV: Claim 8 stands or falls on its own;
- Group V: Claims 5-6 stand or fall together;
- Group VI: Claims 9-10 stand or fall together;
- Group VII: Claim 11 stands or falls on its own;
- Group VIII: Claim 12 stands or falls on its own;
- Group IX: Claim 13 stands or falls on its own;
- Group X: Claims 14-19 stand or fall together;

(8) Argument

I. The rejection of the claims 1-4, 7 and 8 under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,305,966 (Arbogast) is in error.

Claims 1-4, 7 and 8 were rejected under 35 U.S.C. § 102(e) as being anticipated by Arbogast (U.S. Patent No. 6,305,966). This rejection should be reversed for the following reasons.

With respect to Group I, claims 1-3:

Claim 1 recites, among other things, a lever mechanism which includes an engaging surface adapted to apply a lever force on the card during insertion of the card in the slot of the connector. Arbogast fails to teach or suggest this claim feature.

In order to anticipate, the cited reference must identically disclose the claimed invention. In fact, Arbogast does not even mention a lever anywhere in the description of the invention. The relied upon element of the reference is simply a resilient upright member 116 which functions as a retention mechanism. The resilient upright member 116 is not identical to a lever mechanism. Nowhere does Arbogast teach or suggest that the resilient upright member 116 may function as a lever. Absent the hindsight afforded by the present application, no one skilled in the art would consider the members 116 of Arbogast to be lever mechanisms. Accordingly, even from a strictly structural analysis, claim 1 is not anticipated by Arbogast and the rejection should be withdrawn.

Moreover, Arbogast does not disclose or suggest any structure wherein the various members / arms could be used to apply a lever force to the card during insertion of the card in the slot. The Office Action does not accord patentable weight to various claim recitations because of the language "adapted to" utilized in the claim, relying on *In re Hutchison*, 69 USPQ 138. This is legal error. The Examiner's understanding of the *Hutchison* case does not accurately represent the state of the law, as functional limitations have been given patentable weight for at least the past several decades. The Examiner may find it instructive to refer to *In re Swinehart*, 169 USPQ 226, 228 (CCPA 1971). In an unpublished, non-precedential decision, the Board of

Appeals recently reversed another Examiner's objection to "adapted to" claim language, with the Examiner relying on the same In re Hutchison case (see Ex parte BRICK, index no. 1178, file name fd001794.pdf).

Accordingly, all recitations of the claims are entitled to patentable weight, and the rejection should be reversed.

Even assuming, for the sake of argument, that the "adapted to" element only requires the "ability to so perform," as asserted by the Examiner, the Examiner's analysis fails. The catches 118 described in Arbogast lack the ability to apply a lever force on the circuit board 506 during insertion of the board 506 in the slot (or at anytime). Because Arbogast describes only a retention mechanism, the catches 118 are adapted to engage the notches 512 only when the board 506 is fully seated in the connector 500. As described in col. 3, lines 27-40, once the catches 118 have snapped into place in the notches 512, the guides 120, 122 and the arms 116 prevent parallel movement of the board 506, the catches 118 prevent upward movement of the board 506, and the "[c]onconnector 500 prevents board 506 from moving further downward." (Emphasis added). In other words, at the time when the relied upon engaging surface (catches 118) contacts the relied upon contact surface (notches 512), the board 506 is already inserted in the connector 500. Accordingly, the retention mechanism described in Arbogast in fact lacks even the ability to perform the recited claim element.

Because Arbogast fails to disclose a lever mechanism including an engaging surface adapted to apply a lever force on the card during insertion of the card in the slot of the connector, claim 1 is not anticipated by Arbogast and is patentable over Arbogast.

Claims 2-3 depend either directly or indirectly from claim 1 and, in the interest of judicial economy, are not argued separately.

With respect to Group II, claim 4:

Claim 4 depends directly from claim 1 and is accordingly patentable for at least the reasons given above with respect to claim 1. Claim 4 is separately patentable for at least the following reasons.

In order to anticipate, the reference must identically disclose the recited claim elements. Claim 4 recites that the card is a memory card. The relied upon element 506 is not a memory card, it is only generally identified as a circuit board.

Accordingly, the Examiner has failed to establish anticipation of claim 4 and the rejection should be reversed.

With respect to Group III, claim 7:

Claim 7 depends directly from claim 1 and is accordingly patentable for at least the reasons given above with respect to claim 1. Claim 7 is separately patentable for at least the following reasons.

Claim 7 recites that the lever mechanism includes a contact surface adapted to be moved from a first open position to a second closed position, and wherein the contact surface moves a greater distance than a distance traveled by the engaging surface when the lever mechanism is moved from the first open position to the second closed position.

The Examiner fails to comply with 37 C.F.R. § 104 (c)(2), because the office action does not sufficiently designate the particular part of the reference relied upon for disclosing each claim recitation and the interrelationships between the claim elements.

The Office Action lacks sufficient clarity to understand which portions of the references are relied upon for each claim element. The Examiner merely alludes to Fig. 7 of the reference and asserts that the reference discloses various recitations of the claim without identifying corresponding elements in the reference or establishing how the elements meet the claim limitation. Applicants are not required to guess as to how the reference is being applied to the claim.

For example, the office action fails to identify at least the following claim features from claim 7: a lever mechanism, a first open position, a second closed position, a distance that a contact surface moves, a distance that an engaging surface moves and the corresponding handling of those items: moving the lever mechanism from the first open position to the second closed position.

In applicants prior response, applicants respectfully requested that the Examiner identify with specificity which portions of Arbogast are being relied on as corresponding to the various claim features, so that a full and fair response may be made. However, in the Advisory Action mailed November 26, 2003, the Examiner fails to address this deficiency or even consider applicants' request or arguments. To the extent that the Office Action fails to satisfactorily

identify the portions of the cited references which are being asserted against the claim elements, the Office Action fails to establish anticipation of the claims.

In any event, claim 7 is patentable over the cited reference. Again, to the extent the rejection may be understood, the Examiner's analysis is in error (presuming the Examiner is relying notches 512 for the recited contact surfaces, which is contrary to applicants' view). As described in Arbogast, the arms 116 are displaced by the movement of the card 506 between the arms. The arms 116 do not close until the notches 512 are aligned with the catches 118, when the arms 116 "snap into place." (see col. 3, lines 32-34). When the arms 116 close, the catches 118 move a small distance (during the snap back of the arms 116), while the notches 512 do not move at all (and are prevented from further downward movement by the connector 500; see col. 3, lines 38-39). Accordingly, it appears that the relied upon engaging surface (catches 118) travels a greater distance than the relied upon contact surfaces (notches 512) when the arms 116 move from an open position to a closed position.

Because the Examiner fails to establish anticipation, and because Arbogast fails to teach or suggest the recited claim elements, claim 7 is patentable over the cited reference. The rejection should be reversed.

With respect to Group IV, claim 8:

Claim 8 depends directly from claim 1 and is accordingly patentable for at least the reasons given above with respect to claim 1. Claim 8 is separately patentable for at least the following reasons.

Claim 8 recites an ejector attached to a base end of the lever mechanism to remove from the slot the card inserted therein when the lever mechanism is moved from a closed position to an open position. The cited reference is devoid of any description which can be fairly said to teach or suggest the recited claim features.

The Examiner fails to comply with 37 C.F.R. § 104 (c)(2), because the office action does not sufficiently designate the particular part of the reference relied upon for disclosing each claim recitation and the interrelationships between the claim elements.

The Office Action lacks sufficient clarity to understand which portions of the references are relied upon for each claim element. The Examiner merely alludes to elements 114 and Figs. 5-8 of the reference and asserts that the reference discloses various recitations of the claim

without identifying corresponding elements in the reference or establishing how the elements meet the claim limitation. Applicants are not required to guess as to how the reference is being applied to the claim.

For example, the office action fails to identify at least the following claim features from claim 8: an ejector, a base end of a lever mechanism, and the corresponding handling of those items: removing from the slot the card inserted therein when the lever mechanism is moved from a closed position to an open position.

In any event, claim 8 is patentable over the cited reference. Again, to the extent the rejection may be understood, the Examiner's analysis is in error. Elements 114 are not ejectors, they are simply described as catches. The catches 114 attach retention mechanism 100 to the connector 500. They have no functionality associated with the movement of the arms 116 or removal of the board 506 from the connector 500.

Because the Examiner fails to establish anticipation, and because Arbogast fails to teach or suggest an ejector attached to a base end of the lever mechanism to remove from the slot the card inserted therein when the lever mechanism is moved from a closed position to an open position, claim 8 is patentable over the cited reference. The rejection should be reversed.

II. The rejection of the claims 5, 6, 9-19 under 35 U.S.C. § 103(a) as being unpatentable over Arbogast in view of U.S. Patent No. 5,889,656 (Yin) is in error.

Claims 5, 6, and 9-19 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Arbogast in view of Yin (U.S. Patent No. 5,889,656). This rejection should be reversed for the following reasons.

With respect to Group V, claims 5-6:

Claims 5 and 6 depend either directly or indirectly from claim 1, and are therefore patentable for at least the reasons given above. Claims 5-6 are separately patentable for the following reasons.

Yin fails to make up for the above-noted deficiencies in Arbogast. Both Arbogast and Yin describe only retention mechanisms. In fact, neither of the cited references discloses or even

mentions a lever anywhere in the respective descriptions of the invention. The relied upon elements of the references are simply arms which function as retention mechanisms. Nowhere does Arbogast teach or suggest that the resilient upright member 116 are levers. Similarly, Yin does not teach or suggest that the various retaining arms (e.g. arms 18, 28, 38, 48) are levers. Accordingly, the Examiner fails to make a *prima facie* case of obviousness and the rejection of claims 5-6.

Moreover, one skilled in the art would not be motivated to combine the references in the manner suggested by the Examiner. The Examiner admits that Arbogast fails to teach or suggest the recited lever pivotally coupled with the connector via a pivot positioned near a base end of the lever, as recited in claim 5. The Examiner asserts that it would be obvious to modify the resilient arms of the primary reference with the pivoting arms of Yin because "such arrangements are well know accommodations." (see final office action, page 4, lines 16-17). However, a statement that modifications of the prior art to meet the claimed invention would have been 'well within the ordinary skill of the art at the time the claimed invention was made' because the references relied upon teach that all aspects of the claimed invention were individually known in the art is not sufficient to establish a *prima facie* case of obviousness without some objective reason to combine the teachings of the references. *Ex parte Levengood*, 28 USPQ2d 1300 (Bd. Pat. App. & Inter. 1993). See also *In re Kotzab*, 217 F.3d 1365, 1371, 55 USPQ2d 1313, 1318 (Fed. Cir. 2000). Quoting MPEP § 2143.01. In the present application, the Examiner has provided no objective reason to combine the teachings, and the rejection should be reversed.

The Examiner has impermissibly failed to weigh suggestions of the primary reference, Arbogast, which teach away from the combination. In the background section, Arbogast disparages the use of additional hardware (including levers or hinged devices) attached to the connector for retention of circuit boards (see col. 1, lines 22-29). In fact, an object of the invention is specifically to eliminate the need for such additional hardware (see col. 1, lines 33-35). Accordingly, the modification proposed by the Examiner renders the retention mechanism described by Arbogast unsatisfactory for its intended purpose of eliminating such additional hardware as the pivoting arms described in Yin. According to MPEP § 2143.01, the proposed modification cannot render the prior art unsatisfactory for its intended purpose. Because the proposed modification would render the prior art invention being modified unsatisfactory for its

intended purpose, there is no suggestion or motivation to make the proposed modification, and the rejection should be reversed. See *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984). See also MPEP § 2143.01.

Moreover, the modification proposed by the Examiner would change a fundamental principle of operation of the cited Arbogast reference. As discussed above, a fundamental principle of operation of the retention mechanism described in Arbogast is the used of resilient arms 116 which spread to accept the inserted board 506 and then snap back into place to engage the retention mechanism. Modifying the resilient arms 116 with pivoting arms would change this fundamental operating principle. It is further fundamental to Arbogast that the retention mechanism utilize a unitary assembly that does not require additional hardware. As noted above, this is a principle object of the invention and each of the independent claims of Arbogast specifically calls for a "unitary piece of material" (see claims 1 and 11 of Arbogast). It is well settled law that the proposed modification cannot change the principle of operation of a reference. Because the modification of the prior art proposed by the Examiner would change the principle of operation of the prior art invention being modified, the teachings of the references are not sufficient to render the claims *prima facie* obvious, and the rejection should be reversed. See *In re Ratti*, 270 F.2d 810, 123 USPQ 349 (CCPA 1959). See also MPEP § 2143.01.

Claim 6 depends from claim 5 and is likewise patentable. In the interest of judicial economy, claim 6 is not separately argued.

With respect to Group VI, claims 9-10:

Claims 9 and 10 depend either directly or indirectly from claim 1, and are therefore patentable for at least the reasons given above. Claims 9-10 are separately patentable for the following reasons.

Yin fails to make up for the deficiencies in Arbogast. Both Arbogast and Yin describe only retention mechanisms. The relied upon elements of the references are simply arms which function as retention mechanisms. Nowhere does Arbogast teach or suggest that the resilient upright member 116 are levers. Similarly, Yin does not teach or suggest that the various retaining arms (e.g. arms 18, 28, 38, 48) are levers. Accordingly, the Examiner fails to make a *prima facie* case of obviousness and the rejection of claims 9-10.

The rejection appears to be procedurally defective because the Examiner fails to set forth how the Yin reference forms any part of the rejection. To the extent that the Examiner's assertion of an obviousness type rejection inherently admits that the primary references fails to teach or suggest all elements of the claim, and because the Examiner fails to set forth how Yin makes up for this deficiency, applicants submit that the Examiner has failed to establish a prima facie case of obviousness.

In any event, claims 9 and 10 are patentable over the cited references. The Examiner relies on element 120 of Arbogast for allegedly teaching the recited locking mechanism coupled with a lever to lock the lever in a closed position. However, element 120 is simply described as a guide surface (see col. 2, lines 37-43), and does not teach or suggest a locking mechanism. In contrast the recited locking mechanism, as noted above, Arbogast relies on the resiliency of the arms 116 to keep the arms 116 in a closed position.

Because the Examiner fails to establish a prima facie case of obviousness, and because the cited combination of references do not teach or suggest the recited locking mechanism, claim 9 is separately patentable over the cited references, and the rejection should be reversed.

Claim 10 depends from claim 9 and is likewise patentable. In the interest of judicial economy, claim 10 is not separately argued.

With respect to Group VII, claim 11:

The Examiner fails to comply with 37 C.F.R. § 104 (c)(2), because the office action does not sufficiently designate the particular part of the reference relied upon for disclosing each claim recitation and the interrelationships between the claim elements.

The Office Action lacks sufficient clarity to understand which portions of the references are relied upon for each claim element. The entirety of the Examiner's rejection of claims 11-13 is reproduced below:

Regarding claims 11-13, the methods disclosed therein are deemed as inherent in the assembly of the claimed apparatus of the preceding claims as fully met by the accompanying references, (Arbogast et al, Yin) and are subsequently rejected.

Accordingly, the office action fails to identify even a single recitation of the claims or how the reference might read on the claims. This rejection falls far short of meeting the Examiner's burden of establishing a prima facie case of obviousness. Applicants are not required to guess as to how the references are being applied to the claim.

In any event, claim 11 is patentable over the cited references. With respect to claim 11, the Examiner cannot rely on *In re Hutchison* and instead relies on inherency. However, the methods of operation of the cited references are completely different than the claims and do not render the claims obvious, inherently or otherwise. In *Arbogast*, the assembly method involves the user pushing the board completely into the connector, at which point the resilient arms snap into place to retain the board. Likewise, in *Yin* the assembly involves the user moving the retention arms out of the way, the user pushing the board completely into the connector, and then the user moving the arms into place to retain the connector. None of the methods of operation of the devices in either reference, individually or in combination, teach or suggest the methods of claim 11, inherently or otherwise.

With respect to claim 11, the claim recites, among other things, actuating the lever mechanism. The office action asserts that the assembly methods disclosed in *Arbogast* / *Yin* inherently teach or suggest the recited claim elements. However, this is incorrect. First, as discussed above, neither of the references discloses any type of lever function, so the various members / arms of *Arbogast* / *Yin* cannot fairly be said to teach or suggest the recited lever mechanism. Moreover, the movements of the various members / arm disclosed in the cited references do not perform lever functions (e.g. do not apply leverage to the card), so neither reference discloses the recited element of actuating the lever mechanism.

In addition to the glaring deficiencies in the Examiner's rejection, and the missing elements from the references' teachings, the Examiner has not proposed how the references might be modified or provided the motivation for combining the references. As noted above with respect to claims 5-6, the Examiner must set forth some objective reason to combine the teachings of the references. Further as noted above, the references are not properly combined because any proposed modification would likely render the primary reference unsatisfactory for its intended purpose and /or change an operating principle of the primary reference.

Because the Examiner fails to even set forth a prima facie case of obviousness, because there is no motivation to combine the references, and because neither *Arbogast* nor *Yin* teaches

or suggests a lever mechanism or actuating a lever mechanism, claim 11 is patentable over the cited references, and the rejection should be reversed.

With respect to Group VIII, claim 12:

Claim 12 depends directly from claim 11 and is patentable for at least the reasons given above in connection with claim 11. Claim 12 is separately patentable for the following reasons.

The Examiner fails to comply with 37 C.F.R. § 104 (c)(2), because the office action does not sufficiently designate the particular part of the reference relied upon for disclosing each claim recitation and the interrelationships between the claim elements.

The Office Action lacks sufficient clarity to understand which portions of the references are relied upon for each claim element. The entirety of the Examiner's rejection of claims 11-13 is reproduced above.

Accordingly, the office action fails to identify even a single recitation of the claims or how the reference might read on the claims. This rejection falls far short of meeting the Examiner's burden of establishing a prima facie case of obviousness. Applicants are not required to guess as to how the references are being applied to the claim.

In any event, claim 12 is separately patentable. Claim 12 recites that actuating the lever mechanism includes moving the card into the slot by moving a contact surface of the lever mechanism from a first position to a second position. Neither reference teaches or suggests this feature, inherently or otherwise.

As noted above, both references simply disclose retention mechanisms. Neither reference discloses anything whatsoever in connection with a lever mechanism that is operable to move a card into a slot by moving the lever.

Because the Examiner fails to even set forth a prima facie case of obviousness, and because the Examiner has provided no motivation to combine the references, and because the cited references, individually and / or in combination, fails to teach or suggest moving the card into the slot by moving a contact surface of the lever mechanism from a first position to a second position, claim 12 is patentable over the cited references and the rejection should be reversed.

With respect to Group IX, claim 13:

Claim 13 depends directly from claim 12 and is patentable for at least the reasons given above in connection with claims 11 and 12. Claim 13 is separately patentable for the following reasons.

The Examiner fails to comply with 37 C.F.R. § 104 (c)(2), because the office action does not sufficiently designate the particular part of the reference relied upon for disclosing each claim recitation and the interrelationships between the claim elements.

The Office Action lacks sufficient clarity to understand which portions of the references are relied upon for each claim element. The entirety of the Examiner's rejection of claims 11-13 is reproduced above.

Accordingly, the office action fails to identify even a single recitation of the claims or how the reference might read on the claims. This rejection falls far short of meeting the Examiner's burden of establishing a prima facie case of obviousness. Applicants are not required to guess as to how the references are being applied to the claim.

In any event, claim 13 is separately patentable. Claim 13 recites removing the card from the slot by moving the lever mechanism from the second position to the first position.

As noted above, both references simply disclose retention mechanisms. Neither reference discloses anything whatsoever in connection with a lever mechanism that is operable to remove a card from a slot by moving the lever.

Because the Examiner fails to even set forth a prima facie case of obviousness, and because the Examiner has provided no motivation to combine the references, and because the cited references, individually and / or in combination, fails to teach or suggest removing the card from the slot by moving the lever mechanism from the second position to the first position, claim 13 is patentable over the cited references and the rejection should be reversed.

With respect to Group X, claims 14-19:

Claim 14 recites numerous elements not taught or suggested by the cited references. For example, among other things, claim 14 recites a lever mechanism including an ejector. Neither of the cited references teaches or suggests these claim features.

As noted above, the cited references fail to teach or suggest any type of lever function, and accordingly do not teach or suggest a lever mechanism. Moreover, the cited references are

absolutely devoid of any teaching in connection with an ejector. In contrast to the present invention as recited in claim 14, the cited references require first disabling the disclosed retention mechanisms and then manual removal of the card (notably without the assistance of any ejector). The various catches (e.g. catch 114) cited in the office action are not ejectors.

Moreover, for the reasons given above in connection with claims 5-6, no one skilled in the art would be motivated to modify Arbogast with the teachings of Yin to replace the resilient arms of Arbogast with the pivoting arms of Yin. The proposed modification would render the Arbogast reference unsatisfactory for its intended purpose of eliminating the need for additional hardware, and /or would change an operating principle of the Arbogast reference which requires a one-piece assembly having resilient arms which snap into place to retain the board.

Because neither Arbogast nor Yin discloses an assembly including a lever mechanism and an ejector, and because there is no motivation to combine the references in the manner suggested by the Examiner, claim 14 is patentable over the cited references, and the rejection should be reversed.

Claims 15-19 depend either directly or indirectly from claim 14 and, in the interest of judicial economy, are not argued separately.

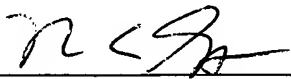
In view of the foregoing, favorable reconsideration and reversal of the rejections is respectfully requested. Early notification of the same is earnestly solicited. If there are any questions regarding the present application, the Examiner and / or the Board is invited to contact the undersigned attorney at the telephone number listed below.

Respectfully submitted,

April 8, 2004

Date

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APPENDIX OF CLAIMS

1. A card-edge connector assembly, comprising:
a connector having a slot therein to receive an edge portion of a card; and
a lever mechanism movably coupled to the connector and having an engaging surface adapted to apply a lever force on the card during insertion of the card in the slot of the connector.
2. The assembly of claim 1, wherein the engaging surface is adapted to contact a contact surface on the card.
3. The assembly of claim 1, wherein the engaging surface includes a surface defined by a protuberance.
4. The assembly of claim 1, wherein the card is a memory card.
5. The assembly of claim 1, wherein the lever mechanism includes a lever pivotally coupled with the connector via a pivot positioned near a base end of the lever.
6. The assembly of claim 5, wherein the engaging surface is located on a middle portion of the lever.

7. The assembly of claim 1, wherein the lever mechanism includes a contact surface adapted to be moved from a first open position to a second closed position, and wherein the contact surface moves a greater distance than a distance traveled by the engaging surface when the lever mechanism is moved from the first open position to the second closed position.

8. The assembly of claim 1, further comprising:

an ejector attached to a base end of the lever mechanism to remove from the slot the card inserted therein when the lever mechanism is moved from a closed position to an open position.

9. The assembly of claim 1, further comprising:

a locking mechanism coupled with a lever to lock the lever in a closed position.

10. The assembly of claim 9, wherein the locking mechanism is adapted to emit an audible sound as it locks into place.

11. A method comprising:

positioning a bottom edge of a card in a slot formed in a card-edge connector such that a first contact surface on a side edge of the card is positioned to contact an engaging surface of a lever mechanism pivotally coupled with the connector; and
actuating the lever mechanism.

12. The method of claim 11, wherein actuating the lever mechanism further comprises:
moving the card into the slot by moving a contact surface of the lever mechanism from a first position to a second position.
13. The method of claim 12, further comprising:
removing the card from the slot by moving the lever mechanism from the second position to the first position.
14. An electrical assembly, comprising:
a connector having a slot therein to receive a card;
a first case attached to a first end of the connector, the first case having first and second opposing planar surfaces defining a channel therebetween, and having a hole formed in each planar surface;
a lever mechanism having a first end, a base end, and a middle portion, the lever mechanism having a contact surface movable by a user between a first position and a second position;
an ejector attached to the base end of the lever;
an engaging surface attached to a surface of the lever mechanism above the ejector; and
a first and second pivots attached to a first and second sides of the lever, respectively, proximate the middle portion of the lever mechanism.

15. The electrical assembly of claim 14, wherein the lever mechanism is pivotally coupled with the connector by insertion of the first pivot in the hole in the first planar surface of the first case and insertion of the second pivot in the hole in the second planar surface of the first case.
16. The electrical assembly of claim 14, wherein the engaging surface includes a surface defined by a protuberance.
17. The electrical assembly of claim 16, wherein the ejector includes a protuberance to engage a bottom edge of the card.
18. The electrical assembly of claim 14, wherein the lever mechanism is made of plastic.
19. The electrical assembly of claim 14, further comprising:
a printed circuit board attached to a bottom surface of the connector.